



9/24/2014

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

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Bob Mac Donald  
Agent for BIOSAFE INC.  
Scientific & Regulatory Consultants, Inc.  
P.O. Box 1014  
Columbia City, IN 46725

SEP 24 2014

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

SUBJECT: HM 4072 Antimicrobial  
EPA Registration Number: 83019-4  
Application Date: June 27, 2014  
Receipt Date: July 02, 2014

Dear Mr. Herber,

The following amendment, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable.

- To update label language

Submit and/or cite all data required for registration/reregistration/registration review of your product when the Agency requires all registrants of similar products to submit such data. A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. The next label printing of this product must use this labeling unless subsequent changes have been approved. You must submit one (1) copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently

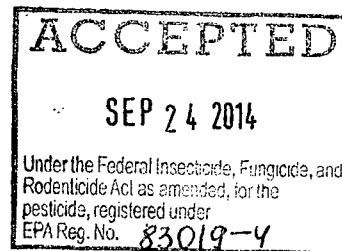
**General comments:**

If you have any questions concerning this letter please contact Emilia Oiguenblik at (703) 347 0199 or Velma Noble at (703) 308-6233.

Sincerely,

Velma Noble  
Product Manager (31)  
Regulatory Management Branch I  
Antimicrobials Division (7510P)

**HM 4072 Antimicrobial**  
**A SILANE QUATERNARY AMMONIUM SALT**  
 EPA Reg. No. 83019-4 EPA Est. 90479-PA-001



ACTIVE INGREDIENT: 3-(trimethoxysilyl) propyldimethyloctadecyl ammonium chloride ..... 72%  
 INERT INGREDIENTS: ..... 28%  
 TOTAL ..... 100%

CONTAINS OVER 12% METHANOL

KEEP OUT OF REACH OF CHILDREN

**DANGER!** ☠ **POISON**

<b>FIRST AID</b>	
Have product container or label with you when calling Poison Control Center or doctor, or going for treatment.	
<b>If inhaled:</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>• Call a Poison Control Center or doctor for treatment advice.</li> </ul>
<b>If in eyes:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after first 5 minutes, and then continue rinsing.</li> <li>• Call a Poison Control Center or doctor for treatment advice.</li> </ul>
<b>If in skin or clothing:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a Poison Control Center or doctor for treatment advice.</li> </ul>
<b>If swallowed:</b>	<ul style="list-style-type: none"> <li>• Call a Poison Control Center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by a Poison Control Center or Doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>

**NOTE TO PHYSICIAN:** Have the product container or label with you when calling a poison control center or doctor or going for treatment.

**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**DANGER! CORROSIVE. CONTAINS OVER 12% METHANOL:** Methanol may cause blindness. Causes skin burns and irreversible eye damage. May be fatal if inhaled. Harmful if swallowed or absorbed through skin. Do not get in eyes, on skin, or on clothing. Do not breathe spray mist. Wear a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any N, R, P or HE prefilter. Wear protective eyewear (goggles, face shield, or safety glasses). Wear coveralls worn over long-sleeved shirt and long pants, socks, chemical-resistant footwear, and gloves.

Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco or using the toilet. Remove and wash contaminated clothing before reuse. Avoid contact with skin, eyes or clothing.

Appropriate measures should be taken to prevent the accumulation of hazardous Concentrations of methanol vapors in the work area.

**ENVIRONMENTAL HAZARDS:**

This pesticide is toxic to fish and aquatic invertebrates. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of

a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

Every effort should be made to contain accidental spills of concentrate to the immediate area. This may be accomplished by the use of sandbags or barrier material to confine the spill to facilitate cleanup and disposal. Contaminated sand or barrier material may then be disposed of by burial in an approved landfill. Many spills may be cleaned up with rags or other absorbent materials by wiping, soaking and/or mopping and allowing the liquid to absorb onto the material. The absorbent material may then be disposed of by incineration or landfill. Floor drains in areas of material use should be protected with absorbent material or barrier material to contain accidental spills.

Inactivation of solutions containing HM 4072 Antimicrobial may be accomplished by addition of an anionic surfactant, or detergent in quantity equivalent to that of HM 4072 Antimicrobial in solution.

### PHYSICAL OR CHEMICAL HAZARDS

**Flammable.** Keep away from heat and open flame.

### PRODUCT FEATURES AND BENEFITS

HM 4072 Antimicrobial imparts durable biostatic activity to the surface of a wide variety of substrates.

HM 4072 Antimicrobial is effective against mold, mildew and algae as a static agent.

Increased efficiency – through proper application, durable bacteriostatic, fungistatic and algistatic surfaces can be attained with a minimum amount of HM 4072 Antimicrobial.

Provides freshness and combats deterioration and discoloration caused by bacteria, fungi and algae.

### DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its label.

**FOR INDUSTRIAL USE:** This product is registered for formulation into antimicrobial products or as a microbiostatic agent for material preservation; neither this product nor the articles treated with this product may state or imply any public health claims. Articles or substances treated with this product will be exempt from FIFRA regulation pursuant to 40 CFR 152.25(a) if the intended use for incorporating this material into a treated article or substance is for the protection of the article or substance itself.

**APPROVED USES:** HM 4072 Antimicrobial is for application or incorporation into manufactured products listed below for use in industrial, institutional, commercial, residential (home, office or automobile) locations for non-food contact uses.

**Plastics, fiberglass, metals, glass, wood, ceramics, stone, natural materials, composites:** Including air filters for furnaces, air conditioners, air purification devices, automobiles, and recirculating air handling systems; aquarium filters; automotive and vehicular parts; roofing materials (tiles, shakes, shingles, granules, stone, membranes, felt, underlayment and synthetic overcoats); building materials and components (including siding, wallboard, wood and wood composites, insulation and non-food contact cabinetry); ceiling tiles; concrete products; paints and coatings, thin films, mastics and sealants, cementitious materials (including caulk, grout and cement and grout premixes ;non-food contact conveyor and humidifier belts; non-food contact countertops; fiberglass duct-board for air handling systems; floor covering; flooring; general purpose (non-food contact) containers; furniture; bathroom and non-food contact kitchen hardware; mats; plumbing supplies and fixtures; sheet and formed glass; sponges and mops; vacuum cleaner bags and filters; foam for packaging and cushioning in non-food contact applications.

**Fibers, fabrics (natural and synthetic, woven and non-woven), leather and household materials (natural and synthetic):** Including buffer pads (abrasive and polishing); mattress cover pads, filling and ticking; pillow covers; sheets; blankets; bedspreads; fiberfill for upholstery, apparel, recreational gear, quilts and pillows; curtains; draperies; carpet and carpet underlay; rugs; upholstery; towels; shower curtains; toilet tank and seat covers; wall covering fabrics and wallpaper (including vinyl) for non-food contact surfaces; umbrellas; fire hose fabric; non-woven disposable diapers; wiping cloths; pre-moistened towelettes and tissue wipes (these do not impart pesticidal properties); apparel including outerwear, sportswear, sleepwear, socks, hosiery, undergarments, gloves and uniforms; footwear (boots, shoes and components); sports equipment and athletic gear;

cloth for sails, ropes, tents and other outdoor equipment; sand bags; tarps; awnings; book covers; pictures.

Institutional, commercial, residential kitchens and bathrooms; for use in formulating products for use on hard non-porous surfaces to impact bacteriostatic/fungistatic activity including bathtubs, glazed tile, vanity tops, shower curtains, shower stalls, sinks, washable walls, floors, window sills, cabinets, exterior of refrigerators, exterior surfaces of appliances and garbage receptacles.

Miscellaneous Manufactured Products: disposable foam cushions for Lapidus Airfloat Systems; foam used as a growth medium for non-food crops and plants.

HM 4072 Antimicrobial provides residual self-sanitizing activity against athlete's foot fungus (*Trichophyton mentagrophytes*) on treated socks. Durable for up to 10 repeated washings; prevents 99.9% of the growth of athlete's foot fungus on the sock.

## **HOW TO USE:**

**MSDS INFORMATION:** BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE MATERIAL SAFETY DATA SHEET CAN BE OBTAINED BY WRITING TO GELEST INC. OR BY CALLING (215) 547-1015. A MATERIAL SAFETY DATA SHEET FOR A TYPICAL USE DILUTION AQUEOUS SOLUTION IS ALSO AVAILABLE.

Wear goggles or face shield and rubber gloves when handling the concentrated material. Use with proper ventilation. Undiluted HM 4072 Antimicrobial contains over 12 percent methanol. Do not breathe vapors. Keep away from heat and open flame. Methanol is released during mixing, application and drying. If desired, methanol removal may be accelerated by heating dilute solution before treatment of substrate. Appropriate measures should be taken to prevent the accumulation of hazardous concentrations of methanol vapors in the work area.

HM 4072 Antimicrobial is for application to organic and inorganic surfaces as a dilute solution to give 0.1 to 1.0 percent by weight of active ingredients. Aqueous solutions are prepared by simply adding the antimicrobial agent to water with stirring. NOTICE: Poor agitation when adding this silane to water can result in locally high concentrations, which may form gel particles. Surfaces are treated with the aqueous solution by brushing, dipping, padding, soaking, spraying or fogging until adequately wet or applying by foaming techniques.

**Spray:** carpets, upholstery and furniture- Always apply only to clean surfaces. Apply to carpet and furniture using a trigger pump sprayer or pressure sprayer. Spray entire surface from 4-6 inches distance until completely covered. Bathrooms and non-food contact building surfaces- Including tubs, showers, tiles, vanity tops, shower curtains, grout, sinks, washable walls, wall paper, floors, window sills, concrete or stone surfaces and garbage cans- Always apply only to clean surfaces. Apply entire surface from 4-6 inches distance until completely covered. Allow to dry thoroughly before use. If spotting occurs, wipe with moist cloth or sponge. Filters and filter material- : Always apply only to clean surfaces. When treating filters, remove filter from unit. Apply diluted HM 4072 solution to surface using a trigger pump sprayer or pressure sprayer. Spray entire surface from 4-6 inches distance until completely covered. Allow to dry thoroughly before use.

**Dipping and Soaking:** Use a wash tub or machines for soaking the items you are treating. Always treat only clean items and use only fresh water. Washable linens, fabrics, draperies, bedding and apparel- Wash Tub: Use washbasin or tub big enough to completely soak the item you are treating. Add dilute HM 4072 antimicrobial to sufficient water to treat 4 pounds of fabric, 2 ounces for 8 pounds. Completely submerge items for 3 minutes. Remove items and dry. Test for staining and color-fastness of fabrics by treating a small concealed area prior to application. Do not reuse solution after dipping/soaking. The substrate can be dried at room temperature in clothes dryer at the appropriate settings for the items. Washing machine: Clean items first. Then run only rinse cycle. Add diluted HM 4072 such that a final concentration of HM 4072 active is approximately 0.5% by weight of the fabric. Run the full rinse cycle to treat the fabrics, then allow to dry overnight or use a dryer on the appropriate heat setting for the fabrics being treated. Test for staining and color-fastness of fabrics by treating a small concealed area prior to application.

The amount of HM 4072 needed for treatment will depend on coarseness and absorbency of the material being treated. Allow to dry thoroughly before reentry. A fan may be used to assist in drying carpeting. Remove children and pets from treated area until completely dried. If spotting occurs, wipe with moist cloth or sponge. Test for staining or color-fastness for the fabrics being treated by treating and drying a small concealed area prior to application. If necessary, reapply every three months or when odor, staining and discoloration due to bacteria, mold stains or mildew stains return.

After applying treatment, the surface is allowed to dry at temperatures from ambient to a maximum of 160°C (320° F) to effect complete curing of silanol groups and to remove water, solvents and/or traces of methanol from hydrolysis. For each application, determine optimum application and drying conditions, such as time and temperature before use. If desired, reapply BIOSAFE Antimicrobial if odor, staining and discoloration due to bacteria, mold or mildew occur.

Incorporate HM 4072 Antimicrobial directly into formulations used to make end-use products, or dilute with water or with organic solvents such as alcohols, ketones, esters, hydrocarbons and chlorinated hydrocarbons and then apply it to or within the organic and inorganic surfaces and materials to give 0.1 to 1.0 percent by weight of active ingredient.

## STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

**STORAGE:** Store in original, tightly closed container in an area inaccessible to children and away from food or feed. Keep tightly closed until ready to use. Reclose tightly after each use and store in original containers at or below 25°C (77°F).

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

### CONTAINER HANDLING:

**(5 gallons or less): Non-Refillable Container.** Do not reuse or refill this container. Triple Rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Drain for 10 seconds after the flow begins to drip. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by other procedures approved by state and local authorities.

**(Over 5 gallons): Non-Refillable Container.** Do not reuse or refill this container. Triple Rinse as follows: Empty remaining contents into application equipment or mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by other procedures approved by state and local authorities.

or:

**(Over 5 gallons): Non-Refillable Containers.** Do not reuse or refill this container. Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Insert pressure rinsing nozzle in the side of the container and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or a mix tank or collect rinsate for later disposal. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill or by other procedures approved by state and local authorities.



# BIOSAFE®

GELEST, INC.

11 East Steel Road, Morrisville, PA 19067  
215-547-1015

MADE IN U.S.A.

**NOTICE:** BIOSAFE and GELEST warrants that the product conforms to its chemical description and is reasonably fit for the purposes stated in the labeling when used in accordance with directions under normal conditions of use; but this warranty of fitness for a particular purpose does not extend to the use of this product contrary to written instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to seller, and buyer assumes the risk of any such use. BIOSAFE Inc. and GELEST, INC. **SPECIFICALLY DISCLAIM ANY OTHER EXPRESS OR IMPLIED WARRANTY, INCLUDING THE WARRANTY OF MERCHANTABILITY.**

UN 1993, FLAMMABLE LIQUIDS, N.O.S.,  
[(Octadecyldimethyl(3-trimethoxysilyl)propyl)  
Ammonium chloride, 72% in methanol]  
DOT Hazard Class: 3, Packing Group II

